



NEWSLETTER OF THE LONDON CHAPTER,
ONTARIO ARCHAEOLOGICAL SOCIETY

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March 2002

02-3

The April meeting of the London Chapter features Jim Wilson, Peter Timmins and Holly Martelle of the cultural resource management firm Archaeologix. They will be doing a series of presentations on interesting sites they have investigated in southwestern Ontario in recent years. Come and join us Thursday April 11th at the museum.

As always, our meeting will be held at 8 pm at the London Museum of Archaeology, 1600 Attawandaron Road, near the corner of Wonderland & Fanshawe Park Road, in the northwest part of the city.

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The Riverview Site (AfGt-81): A Multicomponent Occupation Along the Welland River, Regional Municipality of Niagara, Ontario

Christopher Watts, Robert MacDonald, Robert Pihl, David Robertson, and Deborah Steiss

INTRODUCTION

In 1997, Archaeological Services Inc. was retained by *Gorvan Enterprises Limited* of Willowdale, Ontario to conduct a Stage 3&4 archaeological resource assessment of the Riverview site (AfGt-81), located on the Welland River near the City of Welland, Ontario. First documented in the fall of 1992 by Mayer Heritage Consultants Inc., the Riverview site consists of a series of small camps spanning the Late Archaic through Late Woodland periods. The Stage 3&4 investigations conducted by ASI in fall of 1998 revealed the site had been severely impacted by previous landscape alterations including agricultural activities, episodic filling, the installation of a sanitary sewer, and the construction of a soccer pitch. Despite these impacts, however, fieldwork activities also demonstrated that portions of the site retained significant and relatively undisturbed archaeological deposits. This report describes the work carried out at the Riverview site and the analysis of materials recovered during the Stage 3&4 investigation.

ENVIRONMENTAL CONTEXT OF THE RIVERVIEW SITE

Located between the floodplain and gently rising tableland on the east side of the Welland River, opposite the embouchure of a tributary stream, the Riverview site falls within the Haldimand Clay Plain physiographic region (Chapman and Putnam 1984:156-159). This region is generally flat and poorly drained (Chapman and Putnam 1984:156), although several distinctive landforms, including cobble, clay, and sand beaches, dunes, limestone pavements, and back-shore wetland basins, are also present. More specifically, the site is located in the Haldimand Slough Clay Plain, the largest of the fifteen environmental subregions to have been described in the region (MacDonald 1980).

The Haldimand Slough Clay Plain subregion is characterized by slough ponds and ridges on the gently rolling clay plain that were formed by the burial of bedrock and glacial drumlins and moraines during the high post-glacial water levels in the Lake Erie basin (MacDonald 1980:7). The soils of the region are predominantly acidic clay loams on the ridges and organic mucks in the basins.

The soils along the banks of the Welland River are mapped as a complex of alluvium and Brantford silty clay loam. The alluvial deposits have various drainage characteristics, but tend to be imperfectly to poorly drained, owing to the height of the water table on the floodplain. Brantford is a well-drained Brunisolic Gray Brown Luvisol which has developed on silty clay materials of lacustrine origin. These soils are rated Class 2D (moderate limitations) for agriculture, with the major limitation being undesirable soils structure and/or permeability. Given the relative flatness of the local landscape, Brantford soils tend to frequently merge into imperfectly drained Beverly and

poorly drained Toledo soils in depressions and channels. Beverly is generally classified as a Gleyed Brunisolic Gray Brown Luvisol and is rated Class 2D for agriculture based on undesirable soil structure and/or permeability. Toledo is an Orthic Humic Gleysol which is rated Class 3W (moderately severe limitations) for agriculture due to excess water (Kingston and Presant 1989).

Previous survey work completed along the tributary creek to the west of the site resulted in the documentation of sites—two of which yielded diagnostic material—a short distance from its confluence with the Welland River (Pengelly and Pengelly 1986:77-93). The Cox 1 site (AfGt-62) is a multi-component site that includes Late Paleoindian (Hi-Lo), Late Archaic, and Early Woodland occupations (Pengelly and Pengelly 1986:78). The Cox 2 site (AfGt-63) yielded one Hi-Lo point base (Pengelly and Pengelly 1986:78). The recovery of several netsinkers from Cox 1 led to the suggestion that the confluence of the creek and the river was an ideal location for spring-spawning fish harvests, and perhaps clam collection (Pengelly and Pengelly 1986:78).

LAND USE HISTORY

The 1876 map of Crowland Township (now in the City of Welland) in the *Illustrated Historical Atlas of the Counties of Lincoln & Welland* indicates that the subject property contained an extensive orchard, in addition to a structure that corresponds to a building complex that stood on the property until the 1990s. A 1955 (possibly early spring) Department of Lands and Forests aerial photograph of the subject property (1:15,840 scale) revealed that the field containing the site was cropped westward almost to the river, and a discontinuous fringe of mature hardwoods lined the waterfront. A rill, which still survives as a very subtle topographic feature in the north-central portion of the property, flows northwest into a swale that lies to the north of the property. The extent to which the swale once extended onto the subject property is unclear (Figure 1).

An interview conducted with a descendent of the former landowner in 1998 revealed that the orchard remained extant until the 1960s. The informant also revealed that the property was last cultivated in the 1950s, that a soccer pitch was built on the east-central portion of the property, and that a sanitary sewer was installed through the centre of the property after his family had sold the land in the late 1970s.

A 1980 1:2000 scale aerial photograph of the Welland River in the area of the subject property clearly indicates the presence of the soccer pitch within the eastern portion of the site. The field, and hence the minimum area landscaped, measures approximately 120 metres in length by 70 metres in width. The previously-noted rill traverses the soccer pitch and, while not an obstacle to agriculture, would have proved undesirable in a playing field, and was likely filled during the construction of the pitch. Evidence of this was documented during the Stage 3&4 investigations (see below).

The interview also indicated that the southwestern and northwestern portions of the property, formerly characterized by terrain that gradually sloped downward to the south and towards the river, had been subjected to episodic filling. In the northwest corner of the subject property, filling was initiated by the owner of the neighbouring property, in an effort to fill in a slough, prior to the late

1970s-early 1980s. No indication of filling in either of these areas is apparent on the 1955 aerial photograph.

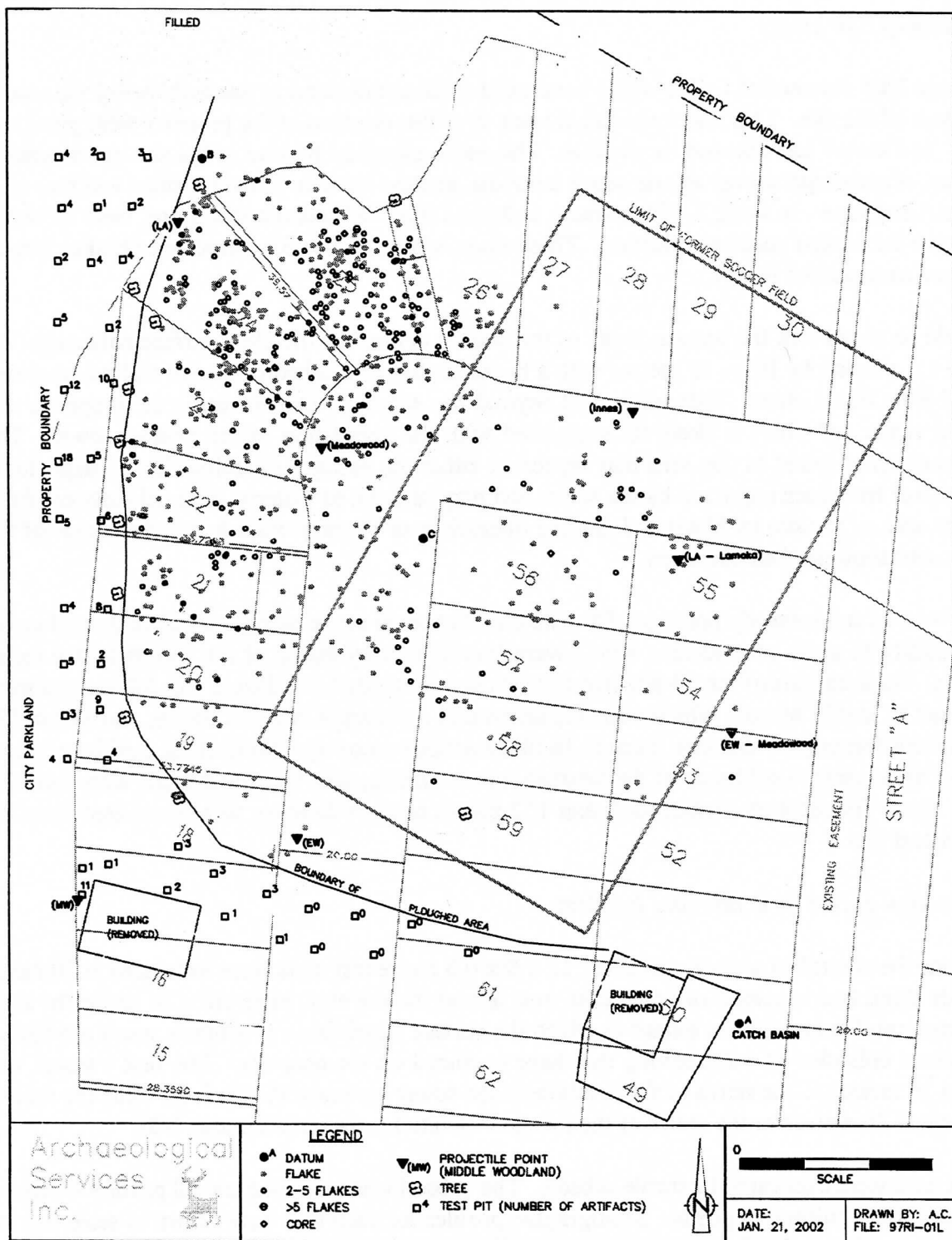


Figure 1. The Riverview Site: Artifact Distribution (Surface)

STAGE 3 INVESTIGATIONS AT THE RIVERVIEW SITE

Definition of Site Limits

The Stage 3&4 assessment began with a controlled surface collection to precisely define the nature and extent of the site. This was undertaken once all arable portions of the property were ploughed with a "soil saver" and allowed to weather. The entire ploughed portion of the site was examined by means of pedestrian survey at one metre intervals, and the location of each artifact was recorded by transit and tape. In total, 1,177 artifacts, collected from 785 individual stations, were recorded during the controlled surface collection. These finds, which include 33 complete or broken formal tools, are summarized below.

It should be noted that the eastern limits of the site, as defined by the 1998 surface collection (see Figure 1), overlap by 10 to 15 metres with a broad scatter of crushed limestone that incorporates natural Bois Blanc chert. Extending well beyond the easement that traverses the property, this crushed stone and chert is likely fill associated with the installation of the sanitary sewer. The cultural material found in this area may represent either the vestiges of archaeological deposits in this area that have been impacted by the sewer and playing field, or material dragged eastward from the core area of the site by filling and grading operations or by the plough during the course of the various archaeological assessments.

Those western and southerly portions of the site area that could not be ploughed, due to ground cover or proximity to areas of extensive filling, were investigated by means of test pitting at five metre intervals. The locations of the 34 positive test pits were recorded (see Figure 1). All test pits were excavated to sterile subsoil, which was encountered at an average depth of 20 cm, and all soil fills were screened through 6 mm wire mesh to facilitate artifact recovery. None of the positive test pits in these areas yielded evidence of disturbance, other than the fact that these lands were formerly tilled. Three fragmentary formal tools and 152 pieces of chert debitage were recovered from the positive test pits.

Examination of Site Structure and Integrity

Following the controlled surface collection, 12 1.0 x 0.5 metre test units were excavated at 30 metre intervals along two transects oriented east-west across the site area, in an effort to assess the site's stratigraphy and to identify the extent to which the surface distribution of artifacts was a product of the various episodes of earthmoving that have occurred on the property. The first transect was situated 30 metres to the north of the manhole in the sewer easement (Units 1-6), while the second was located 20 metres to the south of the manhole (Units 1A-6A) (see Figures 1-3).

All test units were excavated to sterile subsoil. The subsoil was trowelled and all profiles examined for undisturbed cultural deposits. Stratigraphic profiles for each unit were drawn to scale and the vertical depth of the subsoil at each unit was recorded by transit and stadia rod to an arbitrary vertical datum established at the manhole located within the sanitary sewer easement. For comparative purposes, the depth of subsoil at the east bank of the river was similarly recorded.

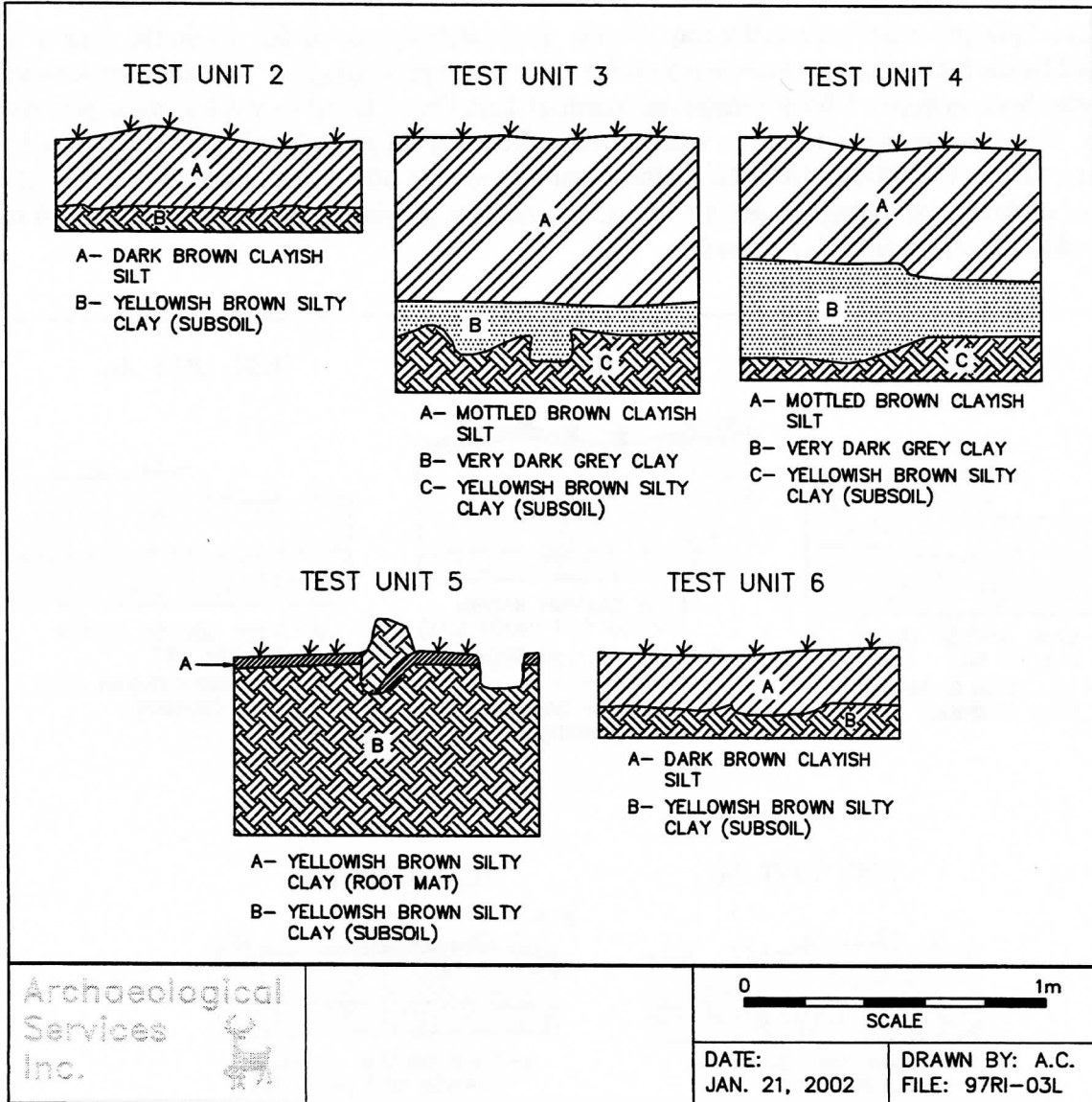


Figure 2. Profiles: Test Units 2 - 6

Not surprisingly, the two test units excavated within the sanitary sewer easement (Test Units 1 and 1A) proved to be totally disturbed. As indicated in Figures 2 and 3, soil profiles were highly variable across the site area to the west of the easement. As one proceeded westward, the depth to subsoil below grade progressively increased and then subsequently declined. Units 2 and 2A exhibited 20 to 25 cm of dark brown to dark greyish brown clayey silt overlying a light yellowish brown silty clay subsoil. Units 3 and 4 in the northern transect, exhibited 40 to 55 cm of mottled brown clayey-silt fill overlying a 10 to 30 cm thick horizon of very dark greyish brown clay that appeared to represent a relict organic topsoil horizon formed under comparatively poor drainage conditions, which in turn

overlies a light yellowish brown silty clay subsoil. Both units appear to fall within the general area occupied by the former watercourse noted on the 1955 aerial photography. Screening of soils from this buried horizon from a 1.0 x 0.5 metre unit north of Test Unit 3 failed to yield a single precontact artifact. One glass fragment, however, was recovered from the fill immediately above the buried soil horizon. Neither Units 3A or 4A in the southern transect, on the other hand, yielded evidence of the massive fill layer, exhibiting instead a 15 to 35 cm of dark greyish brown clayey silt topsoil over light yellowish brown silty clay subsoil.

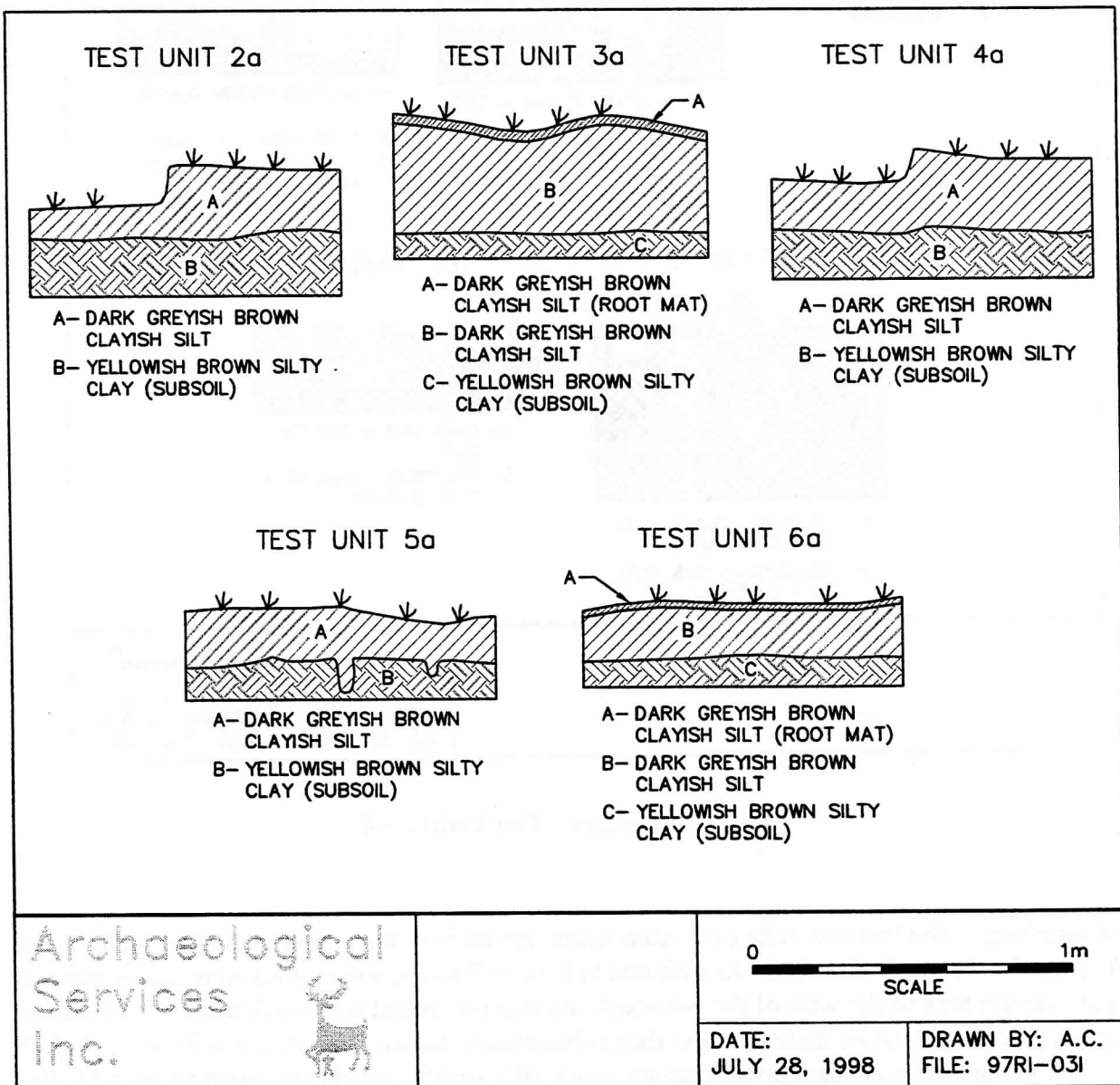


Figure 3. Profiles: Test Units 2a - 6a

Unit 5 possessed no topsoil. Instead, only light yellowish brown silty clay subsoil was encountered. In contrast, Unit 5A, 50 metres to the south, exhibited approximately 20 cm of dark greyish brown clayey silt over light yellowish brown silty clay subsoil. In order to further investigate the absence of any topsoil horizon in Unit 5, five shovel test units were excavated at two to seven metre intervals between units 5 and 5A. Seven metres to the south of Unit 5, excavation of a test pit indicated a similar absence of any topsoil horizon. Three test pits at distances of nine, 12 and 15 metres south of Unit 5 exhibited a 10 cm thick topsoil horizon of very dark greyish brown clay over brown to light yellowish brown subsoil. The final test pit yielded a similar profile to Test Unit 5A located seven metres further south. Finally Units 6 and 6A exhibited a rather leached, greyish brown clayey silt topsoil heavily mottled with subsoil over light yellowish brown silty clay subsoil.

The absence of any topsoil horizon in the vicinity of Test Unit 5 suggested that considerable grading had occurred in this portion of the site. Such activities may have been associated with either the construction of the soccer pitch or the filling of the swale at some other time, whereby the topsoil in this area was bulldozed eastward. If this was, in fact, what occurred, it is unusual that this portion of the site also yielded the most dense concentration of surface artifacts, as noted during the controlled surface collection. It is therefore possible that archaeological deposits, having survived the grading, were dispersed by the ploughing of the exposed subsoil in this portion of the property.

STAGE 3 ARTIFACT ANALYSIS

In total, 1,338 lithic artifacts were recovered during the 1998 Stage 3 assessment, including 36 complete or fragmentary formal tools. A total of 1,177 items was recovered during the controlled surface collection, while 152 artifacts were recovered from test pitting the unploughed southern and western portions of the site area, and nine items were recovered from Test Unit 5A.

Formal Tools

Summary data concerning the sample of 36 formal tools recovered from the Stage 3 investigations of the Riverview site are provided in Table 1.

The assemblage includes six complete or near complete projectile points (Plate 1), consisting of one Late Archaic Lamoka type (.0520), one Late Archaic Innes type (.0502), one probable Middle Woodland Port Maitland type (.0523) and three untyped specimens (.0503, .0504, and .0521). Lamoka points are ascribed to the Narrow Point tradition of the Late Archaic period and are typically assigned a date of ca. 4,500-4,000/3,800 B.P. (Ellis et al. 1990:94). Innes points on the other hand, fall within the Small Point tradition at the end of the Late Archaic period ca. 3,500-2,800 B.P. (Ellis et al. 1990:106). Two of the untyped points, which are both small, side-notched specimens, likely date to either the end of the Late Archaic or the beginning of the subsequent Early Woodland period. The third untyped point is an incomplete stemmed specimen that also likely to dates to the Late Archaic period. The Port Maitland type point is a form characteristic of the Middle Woodland period ca. 2,300-1,300 B.P. (Spence et al. 1990:142). The sample also includes one, or possibly two,

bifacial preforms or "cache blades" associated with the Early Woodland period Meadowood complex, which is thought to date to between ca. 2,800 and 2,350 B.P. (Spence et al. 1990:125).

Table 1: Riverview Site (AfGt-81) Formal Tools - Stage 3

Cat.#	Provenience	Artifact	Metrics (cm)	Comments*
Controlled Surface Collection: Datum A				
.0500	Station 2	1 Biface fragment	+32.5 x 26.6 x 8.5	crude biface; transverse fracture; cortex
.0501	Station 3	1 Biface fragment	+51.2 x 42.1 x 9.0	crude biface; tip missing; ovate to trianguloid form with 1 steeply retouched, concave lateral edge
.0502	Station 4	1 Projectile Point	46.7 x 26.0 x 8.5	Late Archaic (Innes type)
.0503	Station 1	1 Projectile Point fragment	+50.8 x 25.5 x 11.0	probable stemmed point; stem broken (Late Archaic?)
Controlled Surface Collection: Datum B				
.0504	Station 117	1 Projectile Point/Drill fragment	+31.0 x +23.0 x 5.7	probable Late Archaic-Early Woodland projectile point; side-notched; convex base; reworked into a drill; 1 shoulder broken; drill tip broken
.0505	Station 131	1 Biface/Preform fragment	+43.3 x 30.4 x 10.8	crude biface/preform fragment; transverse fracture; rectanguloid form
.0506	Station 190	1 Biface fragment	+37.3 x 34.0 x 5.7	refined Meadowood preform base fragment; transverse fracture
.0507	Station 235	1 Biface fragment	+44.1 x +23.6 x 10.0	crude biface fragment; convex edge; transverse fracture; thermal alteration
.0508	Station 386	1 Biface fragment	+70.1 x 35.8 x 20.1	crude biface fragment; broken at both ends; cortex
.0509	Station 446	1 Biface	47.6 x 41.7 x 15.9	crude biface; trianguloid form; cortex
.0510	Stations 194-380	3 Biface fragments	+52.8 x +34.6 x 17.9 52.5 x +36.0 x 14.2 +29.8 x +26.1 x 9.7	crude biface fragments; amorphous forms; cortex
.0511	Stations 381-550	4 Biface fragments	82.1 x 30.7 x 26.7 +54.8 x +39.2 x 10.0 +50.0 x 29.7 x 15.1 33.4 x +20.1 x 9.3	crude biface fragments; amorphous forms; cortex; one possible bifacial core
.0525	Stations 1-170	1 Uniface fragment	+37.9 x 25.6 x 11.2	unifacial scraper fragment; 2 retouched margins; transverse fracture; cortex
Controlled Surface Collection: Datum C				
.0512	Station 124	1 Drill fragment	+22.5 x 8.4 x 4.8	medial tip section
.0513	Station 59	1 Biface fragment	33.4 x +25.8 x 10.5	crude biface fragment; transverse fracture; broken corner; possible scraper; cortex
.0514	Station 88	1 Biface fragment	+30.2 x +25.7 x 6.6	refined biface fragment; medial section; 2 transverse fractures
.0515	Station 196	1 Biface fragment	+21.8 x +30.9 x 6.4	refined biface fragment; possible base portion of contracting stemmed projectile point
.0516	Station 114	1 Biface	32.3 x 19.6 x 7.8	crude biface; rectanguloid form; possible scraper; cortex
.0517	Station 95	1 Biface fragment	- x - x -	edge fragment; fine retouch
.0518	Station 133	1 Biface	37.3 x 24.3 x 9.3	biface; end and lateral scraper; graver end; ovate-acuminate form;
.0519	Station 159	1 Biface fragment	- x - x -	edge fragment; crude retouch
.0520	Station 65	1 Projectile Point	37.2 x 15.0 x 3.9	Late Archaic (Lamoka type)
.0521	Station 129	1 Projectile Point	32.5 x 21.0 x 6.4	probable Late Archaic-Early Woodland projectile point; side-notched; convex base; blade asymmetrically reworked
.0522	Station 123	1 Biface fragment	+42.2 x +25.6 x 4.9	refined biface blade fragment; isosceles triangular form; transverse fracture; possible Meadowood preform
.0526	Stations 150-250	1 Biface fragment	37.0 x +19.4 x 10.1	edge fragment; crude retouch; cortex

Table 1: Riverview Site (AfGt-81) Formal Tools - Stage 3

Cat.#	Provenience	Artifact	Metrics (cm)	Comments*
.0527	Stations 1-100	3 Bifaces	42.9 x 33.8 x 15.8 48.6 x 31.3 x 15.1 34.6 x 33.6 x 15.7	crude biface; rectanguloid form; 2 crudely retouched margins crude biface; amorphous form; discontinuous crude retouch crude biface; circular form; continuous crude retouch
Test Pits				
.0523	Test Pit 34	1 Projectile Point fragment	+24.2 x 20.2 x 5.9	probable Middle Woodland (Port Maitland type); tip missing; side-notched; concave base
.0524	Test Pits 1-36	2 Biface fragments	+24.5 x 12.9 x 6.0 +30.9 x 26.9 x 11.7	1 refined biface fragment; possible hafted graver/drill 1 crude biface fragment
Total		36 Tools		

*all items are Onondaga chert

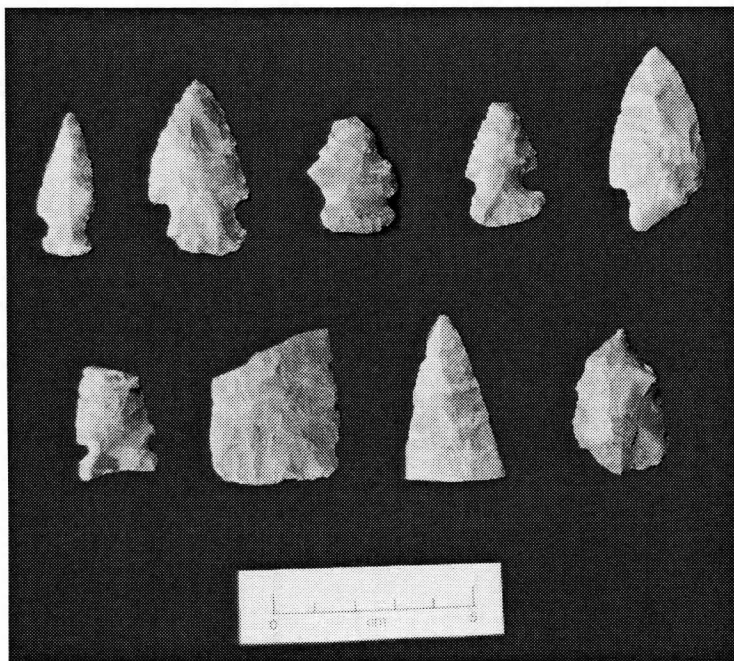


Plate 1. Formal tools from Riverview.

Top (L to R): Lamoka, Innes, untyped Late Archaic-Early Woodland side notched, stemmed Late Archaic. Bottom (L to R): Port Maitland, Meadowood preforms, combination scraper/graver

In summary, the Stage 3 formal tools suggest that an extensive occupation of the site occurred during the transitional period between the Late Archaic and Early Woodland periods. However, unlike materials recovered during earlier assessments of the property by Mayer Heritage Consultants Inc., none of the diagnostic material collected during the 1998 assessment is indicative of a Late Woodland period occupation. Such material recovered during previous investigations of the site included Middleport, Nanticoke Notched and Nanticoke Triangular projectile points as well as Late Woodland period ceramic vessel sherds (MHCI 1992:2).

Debitage

All debitage was sorted by flake type using criteria established by Thomas (1992). *Primary thinning flakes* tend to be somewhat thick and chunky, with relatively deep and usually random dorsal flake scars and relatively large beta angles. *Secondary knapping flakes* are thin and more regular in cross

section, with shallower dorsal flake scars that tend to be more aligned perpendicular to the striking platform. The beta angle tends to be more acute, although the striking platform may be crushed or rounded by platform preparation. *Secondary retouch flakes* are very thin and flat, with very shallow dorsal flake scars that tend to be oriented perpendicular to the striking platform. The beta angle is usually acute, although the striking platform may be crushed, rounded, or worn. The cross section is lenticular or an extremely flat trapezoid or triangle and the overall size tends to be in the one centimetre range or less. *Shatter* consists of angular "chunks" and broken flakes which preserve no bulbs of percussion or other discernible characteristics of flaking.

The debitage sample (Table 2) includes a total of 107 primary thinning flakes (8% of the sample), 417 secondary knapping flakes (32% of the sample), 195 secondary retouch flakes (15% of the sample), and 572 pieces of shatter (44% of the sample). Seven cores or core fragments, and four miscellaneous chunks of chert were recovered as well. Sixty-three flakes (5% of the sample) exhibit macroscopic traces of retouch or utilization, including 16 primary thinning flakes (15% of the primary flake sample), 27 secondary knapping flakes (6% of the secondary knapping flake sample) and 20 shatter fragments (3% of the shatter sample).

Table 2: Riverview Site (AfGt-81) Debitage - Stage 3

Cat.	Provenience	Flake Type	Unmodified	Retouched/Utilized	Total
.0001	Datum B: Stations 381-550	Primary Thinning	25	3	28
.0002	Datum B: Stations 381-550	Secondary Knapping	93	5	98
.0003	Datum B: Stations 381-550	Shatter	115	4	119
.0004	Datum B: Stations 381-550	Secondary Retouch	37	0	37
.0005	Datum B: Stations 381-550	Core Fragment	1	0	1
.0010	Datum B: Stations 194-380	Primary Thinning	13	8	21
.0011	Datum B: Stations 194-380	Secondary Knapping	108	9	117
.0012	Datum B: Stations 194-380	Shatter	118	8	126
.0013	Datum B: Stations 194-380	Secondary Retouch	59	0	59
.0014	Datum B: Stations 194-380	Core Fragment	1	0	1
.0020	Datum C: Stations 150-250	Primary Thinning	12	3	15
.0021	Datum C: Stations 150-250	Secondary Knapping	32	3	35
.0022	Datum C: Stations 150-250	Shatter	95	4	99
.0023	Datum C: Stations 150-250	Secondary Retouch	13	0	13
.0024	Datum C: Stations 150-250	Core	1	0	1
.0030	Datum B: Stations 1-170 Datum A: Stations 1-10	Primary Thinning	18*	1	19
.0031	Datum B: Stations 1-170 Datum A: Stations 1-10	Secondary Knapping	67	4	71
.0032	Datum B: Stations 1-170 Datum A: Stations 1-10	Shatter	79	3	82
.0033	Datum B: Stations 1-170 Datum A: Stations 1-10	Secondary Retouch	29	0	29
.0034	Datum B: Stations 1-170 Datum A: Stations 1-10	Core Fragments	3*	0	3
.0035	Datum B: Stations 1-170 Datum A: Stations 1-10	Miscellaneous Chunk	1	0	1
.0040	Datum A: Stations 11-18	Primary Thinning	2	0	2
.0041	Datum A: Stations 11-18	Secondary Knapping	2	1	3
.0042	Datum A: Stations 11-18	Shatter	3	0	3
.0043	Datum A: Stations 11-18	Secondary Retouch	1	0	1
.0050	Test Pits 1-36	Primary Thinning	9	0	9

Table 2: Riverview Site (AfGt-81) Debitage - Stage 3

Cat.	Provenience	Flake Type	Unmodified	Retouched/Utilized	Total
.0051	Test Pits 1-36	Secondary Knapping	28	0	28
.0052	Test Pits 1-36	Shatter	56**	0	56
.0053	Test Pits 1-36	Secondary Retouch	42	0	42
.0060	Test Unit 5A	Secondary Knapping	1	1	2
.0061	Test Unit 5A	Shatter	6	0	6
.0062	Test Unit 5A	Secondary Retouch	1	0	1
.0070	Test Pits 31-35	Shatter	11	0	11
.0071	Test Pits 31-35	Secondary Knapping	3†	0	3
.0080	Datum C: Stations 251-293	Primary Thinning	3	0	3
.0081	Datum C: Stations 251-293	Secondary Knapping	11	0	11
.0082	Datum C: Stations 251-293	Shatter	12	1	13
.0083	Datum C: Stations 251-293	Secondary Retouch	3	0	3
.0090	Datum C: Stations 1-100	Primary Thinning	9	1	10
.0091	Datum C: Stations 1-100	Secondary Knapping	45	4	49
.0092	Datum C: Stations 1-100	Shatter	57	0	57
.0093	Datum C: Stations 1-100	Secondary Retouch	10	0	10
.0094	Datum C: Stations 1-100	Core Fragment	1	0	1
.0095	Datum C: Stations 1-100	Miscellaneous Chunk	3	0	3
Total			1239	63	1302

*incl. 1 Bois Blanc; **incl. 1 Upper Mercer; †incl. 1 Selkirk

All of the material is Onondaga chert, with the exception of one fragmentary core and one primary thinning flake of Bois Blanc chert, one shatter fragment of Upper Mercer chert and one secondary knapping flake of Selkirk chert.

STAGE 4 INVESTIGATIONS OF THE RIVERVIEW SITE

Based on the results obtained during the Stage 3 investigation (ASI 1998a:18-19), a study design for Stage 4 fieldwork was developed in consultation with Mr. Neal Ferris of the *OMTCR*. This design was based on the likelihood that any portion of the site within the area of the surface scatter lacked significant integrity, and that the surface scatter itself could not be regarded as a reliable indicator of the character or extent of the site. Given the disturbed character of much of the site, and the lengthy span of the site's use, it appeared unlikely that investigation by means of comprehensive block excavation in this area would permit identification of any discrete components that would yield significant data concerning any one particular occupation. As such, a series of test trenches to be mechanically excavated by Gradall was proposed in this area to reveal the nature and extent of any subsurface cultural remains. This task would also permit a more detailed characterization of previous soil disturbances. For the areas to the south and west of the ploughed lands, where test-pit survey had indicated only agricultural disturbance, excavation of one-metre-square test units was the methodology chosen for Stage 4 investigations.

Trench A

The first trench to be stripped, Trench A, was positioned within the surface scatter on a bearing of 60° from magnetic north (see Figure 4). Trench A measured approximately four metres in width and

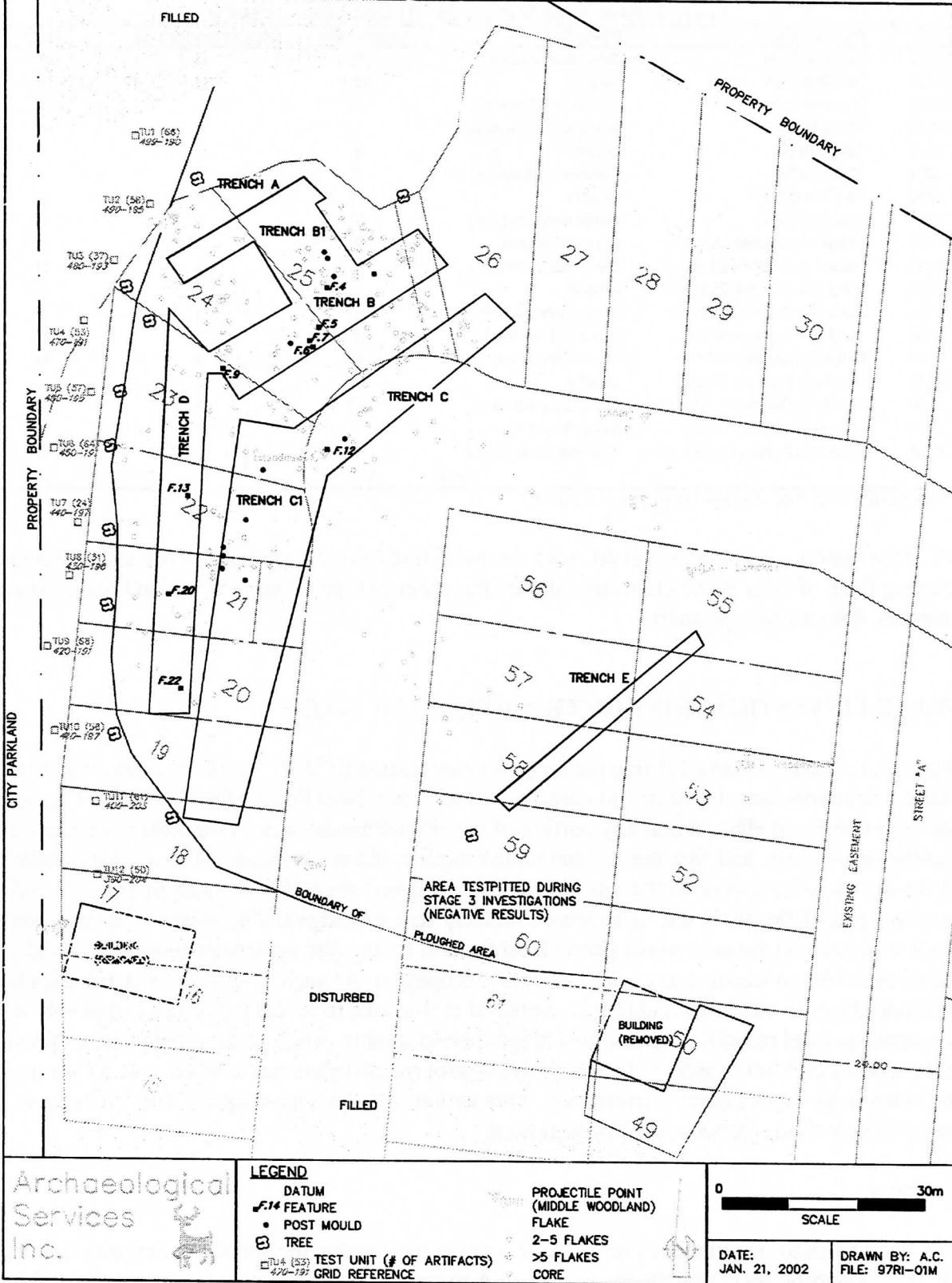


Figure 4. Riverview Site: Stage 4 Investigations

25 metres in length. As noted during the Stage 3 investigations, due to the relative absence of topsoil in this area, Gradall stripping proceeded by carefully removing a thin veneer of topsoil using the blade edge. Subsoil was clearly exposed at a depth of approximately 5 cm below surface. No cultural features or postmoulds were apparent in the subsoil.

Trench B

The second trench to be examined, Trench B, was located approximately 15 metres southeast of Trench A in the northern portion of the property. Trench B measured approximately five metres in width and 38 metres in length with an orientation bearing 60° from magnetic north (see Figure 4). Initial explorations in the northern portion of this trench (i.e., within the first 5-6 metres in length) revealed a 50 cm layer of topsoil mottled with a greasy greyish-black fill, underlain by approximately 30 cm of black fill (containing pieces of broken glass and plastic) on top of yellow subsoil. This soil profile undoubtedly relates to filling of the former swale or rill as noted above. The remaining area had minimal topsoil apparent over the largely exposed subsoil. The later portion of the trench, that is the remaining 32 metres, revealed two postmoulds and four features (summarized in Table 3, below).

Table 3: Summary of Features Present in Trench B

Feature No.	Feat. Type	Plan Shape	Profile Shape	Dimensions (cm)			Fill Type	Primary Matrix	Secondary Matrices
				length	width	depth			
Feature 4	Pit	Ovate	Shallow Basin	282	110	26	Mottled	Organic Soil	Subsoil, Ash, Charcoal
Feature 5	Pit	Ovate	Skewed	66	43	18	Mottled	Organic Soil	Subsoil
Feature 6	Pit	Ovate	Shallow Basin	20	13	19	Mottled	Organic Soil	Subsoil, Charcoal
Feature 9	Pit	Ovate	Shallow Basin	93	36	08	Mottled	Organic Soil	Subsoil

Feature 4 is perhaps the most interesting of the subsurface cultural remains from Trench B. As noted in Table 1, Feature 4 was a large, shallow, ovate stain containing organic topsoils, subsoil, ash and charcoal (see Figure 4 and Plate 2), a portion of which was removed for future paleobotanical analysis. Of note in comparison to the other features, is the large artifact sample recovered

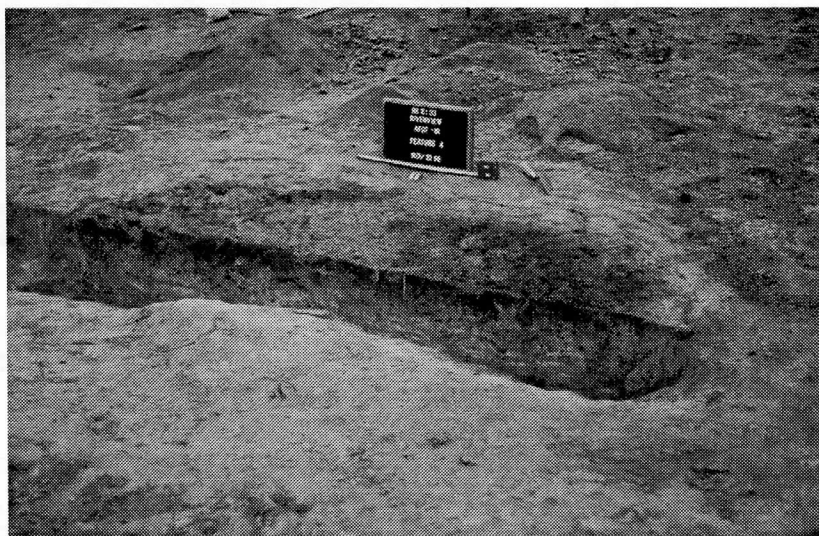


Plate 2. Plan and Profile of Feature 4 in Trench B

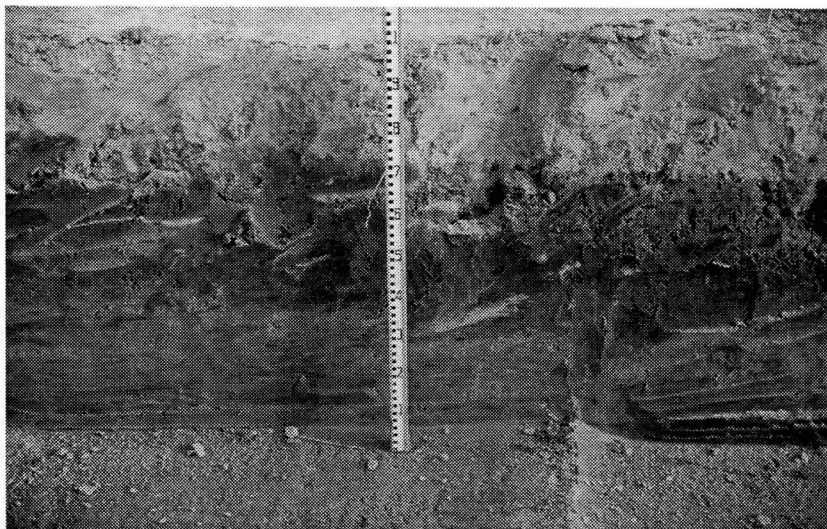
from this feature. The sample of lithic artifacts from Feature 4 included four formal tools including two biface fragments, one unifacial tool made on a secondary knapping flake, and one very crude drill tip, in addition to over 370 pieces of debitage. With respect to ceramics, Feature 4 produced rim sherds from at least three vessels attributed to the Middle Woodland period, as well as numerous neck, body and basal sherds.

Feature 9 is also significant. It contained over 86 pieces of lithic debitage, and was located at the juncture of Trenches B and D. This feature may be described as ovate, with a shallow basin-like profile. It was comprised primarily of subsoil, although approximately 30% of the soil was organic topsoils. The two remaining features (Features 5 and 6) also produced artifacts, although the samples from these features are markedly smaller. Feature 5 contained 34 pieces of lithic debitage, while Feature 6 produced three pieces of lithic debitage.

Trench B1 Extension

This small trench, excavated between the central portions of Trenches A and B (see Figure 4), was excavated for the purpose of fully exposing Feature 4 which, at the time of excavating Trench B, was only partially visible.

The B1 extension measured approximately 12 metres in length and approximately 14 metres in width, and exhibited a soil profile similar to that of Trench A. No additional features were observed in Trench B1, although three additional postmoulds were present. These were designated Postmoulds 10-12.



Trench C

**Plate 3. Soil profile with evidence of filling
in the northern portion of Trench C**

The third trench to be excavated, Trench C, was located approximately nine metres east of Trench B. It measured approximately five metres in width and 45 metres in length before changing width and direction at the turning point of the road allowance (see Figure 4 and *Trench C1*, below). The orientation of Trench C was approximately 55° from magnetic north. Like Trench B, this trench was extensively disturbed in the northern end of excavation (approximately 16 metres from north to south) and exhibited a soil profile similar to the adjacent portion of Trench B (see Plate 3). The remaining 29 metres of this trench produced one feature (Feature 12) and one postmould (Postmould 9).

Feature 12 was an ovate, basin-like pit measuring approximately 85 cm in length, 40 cm in width, and 11 cm in depth. It comprised predominantly dark soil, mottled with subsoil and charcoal. Despite displaying properties consistent with a cultural feature (e.g., organic soils, basin-shaped profile), Feature 12 yielded no artifacts. The postmould from Trench C, labelled Postmould 9, was 7 cm in diameter with a depth of 17 cm.

Trench C1

The fourth trench to be investigated, Trench C1, formed an extension of Trench C. The orientation of Trench C1 was adjusted from a bearing of 55° to approximately 10° in an effort to form a parallel line with the western property boundary. This trench had an overall length of 40 metres with a width of ten metres. Trench C1 contained no features and only six postmoulds (Postmoulds 3-8). Postmould 3 had a diameter of 12.4 cm and a depth of 21.0 cm. Postmould 4 had a diameter of 8.8 cm and a depth of 19.0 cm. Postmould 5 yielded a diameter of 6.2 cm and a depth of 21.0 cm. Postmould 6 contained a diameter of 5.6 cm with a depth of 17.8 cm. Postmould 7 had a diameter of 12.0 cm with a depth of 11.4 cm, while Postmould 8 produced a diameter of 17.6 cm and a depth of 18.8 cm.

Trench D

The fifth trench to be excavated, Trench D (see Figure 4), was located immediately west of Trench C1 and was aligned north-south on a bearing approximately 3° from magnetic north. Trench D measured approximately five metres in width and approximately 40 metres in length. Trench D contained three features (Feature 13, Feature 20, and Feature 22, summarized in Table 4, below) and no postmoulds.

Table 4: Summary of Features Present in Trench D

Feat. No.	Feat. Type	Plan Shape	Profile Shape	Dimensions (cm)			Fill Type	Primary Matrix	Secondary Matrices
				length	width	depth			
Feature 13	Pit	Ovate	Shallow Basin	28	26	13	Mottled	Organic Soil	Subsoil
Feature 20	Pit	Ovate	Shallow Basin	43	44	16	Mottled	Organic Soil	Charcoal
Feature 22	Pit	Ovate	Shallow Basin	60	59	16	Mottled	Organic Soil	Fired Soil, Charcoal

Of interest in Trench D was the presence of Feature 22, an ovate, basin-shaped pit containing evidence of two Middle Woodland ceramic vessels, one of which (Vessel 2) produced enough sherds for a partial reconstruction. Feature 22 measured approximately 60 cm in length, 59 cm in width and 16 cm in depth. The feature fill was a mottled collection of organic topsoils, fired soil and charcoal, a portion of which was collected for future flotation analysis. In addition to the ceramics, Feature 22 also provided a small sample of lithic debitage in the form of seven secondary knapping flakes, four secondary retouch flakes, one primary thinning flake and eleven pieces of shatter (see Table 6, below).

Two smaller features containing artifacts were also excavated. Feature 13 was an ovate, basin-shaped pit feature measuring approximately 28 cm in length, 26 cm in width and 13 cm in depth. This feature was mottled with organic soils and subsoil and produced one secondary knapping flake. The other feature, designated Feature 20, was also an ovate, basin-shaped pit, measuring 43 cm in length, 44 cm in width, and 16 cm in depth. The feature fill was largely mottled with organic soils, subsoil, and charcoal. It produced two primary thinning flakes, two secondary knapping flakes, one secondary retouch flake, one crude biface, and one biface fragment (see Table 6, below).

Trench E

Trench E was placed in the area of the soccer pitch in order to examine the potential for subsurface cultural remains (see Figure 4). This trench was aligned with a bearing of 50° from magnetic north, making it roughly parallel with Trench C to the west. Trench E measured five metres in width and 40 metres in length. This trench witnessed similar disturbance as documented in the northern portions of Trenches B and C. In Trench E, undisturbed subsoil was not encountered until a depth of greater than one metre, and no cultural remains were documented within this trench.

One-Metre-Square Test Units

As noted above, one-metre-square test units were placed in the area between the edge of ploughing and the western property boundary (see Figure 4), in an effort to document comparatively undisturbed deposits. In total, 12 one-metre-square test units were excavated in this area. The units were oriented towards magnetic north, and placed in a north-south interval of ten metres (see Figure 4). With respect to stratigraphic profiles, only four of the 12 test units displayed evidence of topsoil. These four units (TU 2, TU 3, TU 11, and TU 12) produced profiles consisting of 2-4 cm of sod (overburden), followed by 10-15 cm of topsoil, underlain by subsoil. For the remaining units lacking topsoil, a typical soil profile consisted of approximately 2-4 cm of sod (overburden) underlain by subsoil. The artifacts recovered from these units consist mostly of Onondaga chert debitage, although formal tools consisting of six biface fragments, four projectile point tips, and one end scraper were also recovered (see Tables 5 and 6, below).

STAGE 4 ARTIFACT ANALYSIS

In total, 1,304 artifacts were recovered during the Stage 4 investigations, including 17 complete or fragmentary formal tools, 1,108 pieces of lithic debitage, and 179 ceramic artifacts (ASI 1998b).

Formal Tools

Summary data concerning the sample of 17 formal tools recovered during the Stage 4 investigations are provided in Table 5.

Table 5: Riverview Site (AfGt-81) Formal Tools - Stage 4

Cat.#	Provenience	Artifact	Metrics (mm)	Comments*
.2004	Feature 4	1 Biface fragment	19.0 x 33.0 x 12.0	crude biface; basal fragment; thermally altered
.2005	Feature 4	1 Biface fragment	15.0 x 35.0 x 7.0	crude biface; possible basal fragment; thermally altered
.2006	Feature 4	1 Unifacial tool	37.0 x 21.0 x 5.0	made on secondary knapping flake; retouch on dorsal surfaces and lateral edges
.2010	Feature 4	1 Drill	36.0 x 21.0 x 5.0	very crude; missing base
.2068	Feature 20	1 Biface	40.0 x 36.0 x 18.0	crude; complete
.2069	Feature 20	1 Biface fragment	20.0 x 19.0 x 7.0	thermally altered
.2104	Sq. 390-204	1 End scraper	42.0 x 23.0 x 10.0	
.2124	Sq. 400-203	1 Biface fragment	15.1 x 25.0 x 7.0	basal fragment
.2126	Sq. 400-203	1 Projectile Pt. tip	29.0 x 17.0 x 6.0	
.2155	Sq. 410-197	1 Projectile Pt. tip	21.0 x 10.0 x 4.0	
.2215	Sq. 440-197	1 Projectile Pt. tip	22.0 x 14.0 x 5.0	Bois Blanc chert?
.2237	Sq. 499-190	1 Projectile Pt. tip	27.0 x 13.0 x 7.0	
.2255	Sq. 450-191	1 Biface fragment	63.0 x 29.0 x 14.0	crude
.2256	Sq. 450-191	1 Biface fragment (possible)	36.0 x 16.0 x 7.0	
.2314	Sq. 480-193	1 Biface fragment	57.0 x 45.0 x 21.0	crude
.2336	Sq. 490-195	1 Biface fragment	22.0 x 29.0 x 7.0	tip
.2337	Sq. 490-195	1 Biface fragment	35.0 x 28.0 x 6.0	basal fragment
Total		17 Tools		

*all items are Onondaga chert unless indicated otherwise

The assemblage includes the tips of four projectile points which are difficult to date. It is likely, though, that these specimens date to a time frame spanning the Late Archaic to Late Woodland periods (ca. 4,500- 400 B.P.) based on the artifact analysis of formal tools recovered during the Stage 3 investigations.

Debitage

Alldebitage was sorted by flake type using criteria established by Thomas (1992) and described above. Thedebitage sample from the Stage 4 investigations (Table 6) includes 1,108 specimens consisting of 1,077 pieces of unmodified chertdebitage. Specifically, a total of 37 primary thinning flakes (3% of thedebitage sample), 356 secondary knapping flakes (32% of thedebitage sample), 278 secondary retouch flakes (25% of thedebitage sample), and 436 pieces of shatter (39% of the sample) was recovered. One miscellaneous chunk of chert was also found.

Table 6: Riverview Site (AfGt-81) Debitage - Stage 4

Cat.	Provenience	Flake Type	Unmodified	Retouched /Utilized	Total	Comments*
.2000	Feature 4	Primary Thinning	14	0	28	6 thermally altered
.2001	Feature 4	Secondary Knapping	133	0	133	50 thermally altered
.2002	Feature 4	Secondary Retouch	87	0	87	20 thermally altered
.2003	Feature 4	Shatter	136	0	136	61 thermally altered
.2007	Feature 4	Shatter	0	1	1	
.2008	Feature 4	Shatter	0	1	1	
.2009	Feature 4	Secondary Knapping	0	1	1	fragment
.2020	Feature 5	Secondary Knapping	13	0	13	1 thermally altered
.2021	Feature 5	Shatter	12	0	12	

Table 6: Riverview Site (AfGt-81) Debitage - Stage 4

Cat.	Provenience	Flake Type	Unmodified	Retouched /Utilized	Total	Comments*
.2022	Feature 5	Secondary Retouch	8	0	8	
.2024	Feature 5	Primary Thinning	1	0	1	
.2030	Feature 1	Chunk	1	0	1	surface; non-cultural
.2035	Feature 6	Secondary Knapping	2	0	2	
.2036	Feature 6	Shatter	1	0	1	
.2040	Feature 7	Shatter	1	0	1	surface; non-cultural
.2045	Feature 9	Secondary Knapping	37	0	37	1 thermally altered
.2046	Feature 9	Secondary Retouch	10	0	10	3 thermally altered
.2047	Feature 9	Shatter	36	0	36	1 thermally altered
.2048	Feature 9	Primary Thinning	1	0	1	
.2049	Feature 9	Primary Thinning	0	1	1	
.2050	Feature 9	Secondary Knapping	0	1	1	
.2060	Feature 13	Secondary Knapping	1	0	1	possibly non-cultural (disturbance in profile)
.2065	Feature 20	Primary Thinning	2	0	2	
.2066	Feature 20	Secondary Knapping	2	0	2	
.2067	Feature 20	Secondary Retouch	1	0	1	thermally altered
.2080	Feature 22	Secondary Knapping	7	0	7	3 thermally altered
.2081	Feature 22	Secondary Retouch	4	0	4	2 thermally altered
.2082	Feature 22	Primary Thinning	1	0	1	
.2083	Feature 22	Shatter	11	0	11	4 thermally altered
.2100	Sq. 390-204	Secondary Knapping	10	0	10	
.2101	Sq. 390-204	Secondary Retouch	14	0	14	5 thermally altered
.2102	Sq. 390-204	Shatter	17	0	17	4 thermally altered
.2103	Sq. 390-204	Primary Thinning	1	0	1	
.2105	Sq. 390-204	Primary Thinning	0	1	1	
.2106	Sq. 390-204	Secondary Knapping	0	1 [†]	1	retouched on alternate lateral edges
.2120	Sq. 400-203	Primary Thinning	4	0	4	
.2121	Sq. 400-203	Secondary Knapping	17	0	17	4 thermally altered
.2122	Sq. 400-203	Shatter	24	0	24	10 thermally altered
.2123	Sq. 400-203	Secondary Retouch	13	0	13	5 thermally altered
.2125	Sq. 400-203	Secondary Knapping	0	1	1	
.2150	Sq. 410-197	Secondary Knapping	15	0	15	4 thermally altered
.2151	Sq. 410-197	Shatter	19	0	19	7 thermally altered
.2152	Sq. 410-197	Secondary Retouch	19	0	19	7 thermally altered
.2153	Sq. 410-197	Shatter	0	1	1	
.2154	Sq. 410-197	Secondary Knapping	0	1	1	
.2170	Sq. 420-191	Primary Thinning	6 [†]	0	6	1 thermally altered
.2171	Sq. 420-191	Secondary Knapping	9	0	9	3 thermally altered
.2172	Sq. 420-191	Shatter	26	0	26	7 thermally altered
.2173	Sq. 420-191	Secondary Retouch	21	0	21	10 thermally altered
.2174	Sq. 420-191	Secondary Knapping	0	1	1	
.2175	Sq. 420-191	Secondary Knapping	0	1	1	utilized on alternate lateral edges
.2176	Sq. 420-191	Secondary Knapping	0	1	1	
.2190	Sq. 430-195	Secondary Knapping	3	0	3	1 thermally altered
.2191	Sq. 430-195	Secondary Retouch	10	0	10	2 thermally altered
.2192	Sq. 430-195	Shatter	12	0	12	6 thermally altered
.2193	Sq. 430-195	Secondary Knapping	0	1	1	
.2194	Sq. 430-195	Shatter	0	1	1	
.2195	Sq. 430-195	Secondary Knapping	0	1	1	
.2196	Sq. 430-195	Shatter	0	1	1	

Table 6: Riverview Site (AfGt-81) Debitage - Stage 4

Cat.	Provenience	Flake Type	Unmodified	Retouched /Utilized	Total	Comments*
.2197	Sq. 430-195	Shatter	0	1	1	
.2198	Sq. 430-195	Shatter	0	1	1	
.2210	Sq. 440-197	Secondary Knapping	7	0	7	3 thermally altered
.2211	Sq. 440-197	Secondary Retouch	6	0	6	1 thermally altered
.2212	Sq. 440-197	Shatter	7	0	7	2 thermally altered
.2213	Sq. 440-197	Secondary Knapping	0	1	1	
.2214	Sq. 440-197	Shatter	0	1	1	
.2230	Sq. 499-190	Secondary Knapping	15	0	15	6 thermally altered
.2231	Sq. 409-190	Shatter	31	0	31	9 thermally altered
.2232	Sq. 409-190	Secondary Retouch	15	0	15	4 thermally altered
.2233	Sq. 409-190	Primary Thinning	1	0	1	
.2234	Sq. 409-190	Secondary Knapping	0	1	1	
.2235	Sq. 409-190	Secondary Knapping	0	1	1	thermally altered
.2236	Sq. 409-190	Secondary Knapping	0	1	1	
.2250	Sq. 450-191	Secondary Knapping	19	0	19	10 thermally altered
.2251	Sq. 450-191	Secondary Retouch	19	0	19	2 thermally altered
.2252	Sq. 450-191	Shatter	22	0	22	5 thermally altered
.2253	Sq. 450-191	Primary Thinning	0	1	1	
.2254	Sq. 450-191	Secondary Knapping	0	1	1	
.2270	Sq. 460-195	Secondary Knapping	7	0	7	
.2271	Sq. 460-195	Secondary Retouch	12	0	12	4 thermally altered
.2273	Sq. 460-195	Shatter	14	0	14	7 thermally altered
.2274	Sq. 460-195	Primary Thinning	1	0	1	
.2275	Sq. 460-195	Shatter	0	1	1	
.2276	Sq. 460-195	Shatter	0	1	1	
.2290	Sq. 470-191	Primary Thinning	3	0	3	
.2291	Sq. 470-191	Secondary Knapping	11	0	11	3 thermally altered
.2292	Sq. 470-191	Shatter	25	0	25	8 thermally altered
.2293	Sq. 470-191	Secondary Retouch	15	0	15	4 thermally altered
.2310	Sq. 480-193	Secondary Knapping	14	0	14	2 thermally altered
.2311	Sq. 480-193	Shatter	15	0	15	3 thermally altered
.2312	Sq. 480-193	Secondary Retouch	6	0	6	2 thermally altered
.2313	Sq. 480-193	Secondary Knapping	0	1	1	
.2330	Sq. 490-195	Secondary Knapping	18	0	18	7 thermally altered
.2331	Sq. 490-195	Shatter	16	0	16	4 thermally altered
.2332	Sq. 490-195	Secondary Retouch	16	0	16	1 thermally altered
.2333	Sq. 490-195	Shatter	0	1	1	
.2334	Sq. 490-195	Secondary Retouch	0	1	1	
.2335	Sq. 490-195	Secondary Retouch	0	1	1	thermally altered
Total			1077	31	1108	

* all items made from Onondaga chert; † Selkirk chert

Thirty-one flakes (2% of thedebitage sample) exhibit macroscopic traces of retouch or utilization, including two primary thinning flakes (5% of the primary flake sample), 16 secondary knapping flakes (4% of the secondary knapping flake sample), two secondary retouch flakes (>1% of the secondary retouch flake sample) and eleven shatter fragments (3% of the shatter sample). All of the material is Onondaga chert, with the exception of one secondary knapping flake of Selkirk chert.

Two features at Riverview (Feature 4 and Feature 22) produced ceramic artifacts. As part of the ceramic analysis, all ceramic sherds were subjected to a detailed examination and sorted into the standard analytic unit—the vessel—wherever possible. Decorative and morphological attributes from all diagnostic sherds (i.e., rim and neck sherds) were compared between the two features, and all vessel associations are noted in Table 7. Although the usual criteria were used to define the sherd types (e.g., a rim is part of the upper vessel with intact exterior and interior surfaces, lip, and a sufficient portion of the neck to note the presence or absence of decorative bands), vessel definition was somewhat more relaxed to include fragmentary rim and/or neck sherds from the two features.

A total of six vessels was defined from fragmentary rim sherds, rim sherds, neck sherds, and a partially-reconstructed vessel (see Plate 4, below).

Based on an analysis of decoration and vessel morphology, the ceramic sample from Features 4 and 22 at Riverview can be associated with the Middle Woodland period (ca. 2,450-1,450 B.P.). In Ontario, this period is commonly divided into three roughly contemporaneous archaeological “cultures” or complexes: the first, known as *Point Peninsula*, is located in south-central and eastern Ontario, and extends into



Plate 4. Partially reconstructed vessel from Feature 22 at Riverview

parts of New York and Vermont; the second, *Saugeen*, is located primarily along the eastern shore of Lake Huron and into the lower Thames River watershed, and finally, *Couture*, is found in extreme southwestern Ontario. In addition to rough geographic boundaries, each complex is thought to possess relatively distinctive material culture traits, primarily in the form of dissimilar ceramic attributes.

Upon inspection of the Riverview sample, however, one is immediately struck by its peculiar combination of ceramic attributes, a combination which does not allow it to be placed comfortably into any one of the three complexes. Indeed, this occurrence has fast become the rule rather than the exception in southern Ontario, and continues to raise questions regarding the taxonomic utility of far-reaching, homogeneous culture complexes during Middle Woodland times (see also Ferris 1999:20; Wilson 1990:121-129, 1991:19). In some respects, the Riverview sample bears the greatest

similarity to extant collections of the Saugeen Complex from the eastern shore of Lake Huron, especially in the use of incising (with or without Pseudo-scallop shell stamping) and vessel morphology. Finlayson's (1977:583-590) ceramic seriation suggests the use of pseudo-scallop shell decoration occurs most frequently during the early stages of the Saugeen Complex followed in time by dentate stamping, although this has been a subject of some debate (Spence et al. 1990:148). Incised or trailed decorations, as displayed on Vessel 1, do not appear to have any chronological sensitivity within the Saugeen ceramic sequence (see Finlayson 1977:584).

Table 7: Riverview Site (AfGt-81) Ceramic Artifacts

Cat.#	Provenience	Type	Period	Description
Trench B				
.1000	Feature 4	Vessel 4 - rim sherd	Middle Woodland	<ul style="list-style-type: none"> • smoothed-over exterior (with evidence of coil construction visible as horizontal 'ridges'), combed interior, and smoothed-over lip • sherd has a gritty texture with coarse grit temper and is poorly knit/fired. • sherd has a straight profile with a bevelled lip • decoration: undecorated • measurements: lip thickness-6.2mm; upper rim thickness-10.3mm
.1001	Feature 4	Vessel 5 - rim sherd	Middle Woodland	<ul style="list-style-type: none"> • smoothed-over exterior (with evidence of coil construction visible as a horizontal 'ridge'), interior and lip • sherd has a gritty texture with coarse grit temper and is poorly knit/fired. • sherd has an outflaring profile with a rounded lip • decoration: undecorated • measurements: lip thickness-7.8mm; upper rim thickness-8.8mm
.1002	Feature 4	Vessel 3 - body sherd	Middle Woodland	<ul style="list-style-type: none"> • smoothed-over exterior, wiped/smoothed-over interior • sherd has a gritty texture with coarse grit temper and is poorly knit/fired • decoration: exterior-wide band of rows of left oblique pseudo-scallop shell stamps over rows of horizontal pseudo-scallop shell stamps (stamps appear to be made by a notched tool); upper decorative band is superimposed with series of parallel incised lines arranged in left oblique rather than right oblique fashion • decoration: interior-undecorated except for small vertical linear stamps at possible lip edge • measurements: body thickness-10.6mm
.1003	Feature 4	Vessel 3 - body sherds	Middle Woodland	<ul style="list-style-type: none"> • same as .1002 with the exception of decoration: exterior-only one sherd displays superimposed series of parallel lines arranged in left oblique rather than right oblique fashion; interior-no vertical linear stamps • measurements: body thickness range = 9.7mm-10.1mm
.1004	Feature 4	body sherds (14)		<ul style="list-style-type: none"> • roughened exterior with combed interiors • at least one sherd has an exfoliated exterior; many have carbon-encrusted interiors. • measurements: body thickness range 6.2mm-9.9mm
.1005	Feature 4	body sherds (2)		<ul style="list-style-type: none"> • smoothed-over exterior and interior • measurements: body thickness-13.6mm
.1006	Feature 4	body (neck?) sherds (2)		<ul style="list-style-type: none"> • smoothed-over exterior which displays incised horizontals • exfoliated interior
.1007	Feature 4	basal sherds (2)		<ul style="list-style-type: none"> • coarse exterior with smooth interior • measurements: body thickness-9.7mm
.1008	Feature 4	fragmentary sherds (17)		<ul style="list-style-type: none"> • coarse exteriors with smooth interiors • some sherds also have coarse interiors • measurements: 6.0mm-10.1mm
Trench D				

Table 7: Riverview Site (AfGt-81) Ceramic Artifacts

Cat.#	Provenience	Type	Period	Description
.1009	Feature 22	Vessel 1 - rim, neck, and body sherds (29); partial reconstruction	Middle Woodland	<ul style="list-style-type: none"> smoothed-over exterior with faint combed interior paste is coarse (sandy) and vessel is poorly knit/fired slightly everted lip (due to impressions at lip edge) with slightly outflaring rim; lip itself varies from flat to rounded decoration: exterior-random incised criss-cross design extending from lip to body (not in bands) decoration: interior-undecorated decoration: lip-inconsistent criss-cross impressions (often oblique) measurements: lip thickness-7.8mm; upper rim thickness (25mm)-10.9mm; neck thickness-10.2mm; shoulder thickness-11.1mm; body thickness-22.5mm; upper rim height-11.0mm
.1010	Feature 22	Vessel 6 - rim sherd	Middle Woodland	<ul style="list-style-type: none"> smoothed-over exterior, interior and lip sherd has a gritty texture with coarse grit temper and is poorly knit/fired specimen is too small to determine profile; lip is rounded decoration: exterior-band of right oblique pseudo-scallop shell stamps at interface between rim and lip (forms a slight pinch) decoration: interior-band of vertical pseudo-scallop shell stamps at lip edge decoration: lip-undecorated measurements: lip thickness-8.0mm; upper rim thickness-8.2mm
.1011	Feature 22	Vessel 2 - rim (missing lip) and body sherds (6), partial reconstruction	Middle Woodland	<ul style="list-style-type: none"> smoothed-over exterior and interior sherds has a gritty texture with coarse grit temper and are poorly knit/fired vessel profile has short, slightly outflaring rim decoration: exterior-numerous bands of short (ca. 15.7mm) right oblique pseudo-scallop shell stamps extending from lip edge to body; no other designs are evident. Pseudo-scallop shell stamps appear to have been impressed with notched tool decoration: interior-undecorated with the exception of very short right oblique pseudo-scallop shell stamps at lip edge decoration: lip-undecorated measurements: lip thickness-5.4mm; neck thickness-6.6mm; upper rim (25mm)-8.2mm; shoulder thickness-8.8mm
.1012	Feature 22	body sherds (9)	Middle Woodland	<ul style="list-style-type: none"> smoothed-over exteriors with wiped interiors sherds have a gritty texture with coarse paste and are poorly knit/fired decoration: exterior-inconsistent criss-cross impressions decoration: interior-undecorated measurements: body thickness: 8.7mm-12.7mm 7 of the 9 sherds likely relate to Vessel 1
.1013	Feature 22	body sherds (9)		<ul style="list-style-type: none"> smoothed-over exteriors with wiped interiors sherds have a gritty texture with coarse paste and are poorly knit/fired decoration: exterior-undecorated decoration: interior-undecorated measurements: body thickness range = 11.8mm-13.6mm
.1014	Feature 22	body sherds (11)		<ul style="list-style-type: none"> smoothed-over exteriors and interiors sherds have a gritty texture with coarse paste and are poorly knit/fired decoration: exterior-undecorated decoration: interior-undecorated measurements: body thickness range = 11.1mm-14.5mm
.1015	Feature 22	body sherd		<ul style="list-style-type: none"> smoothed-over exterior with exfoliated interior sherd has a gritty texture with coarse paste and is poorly knit/fired decoration: exterior-random criss-cross impressions sherd likely relates to Vessel 1
.1016	Feature 22	fragmentary sherds (70)		<ul style="list-style-type: none"> coarse exteriors with smooth interiors measurements: body thickness 9.7mm-11.2mm

Table 7: Riverview Site (AfGt-81) Ceramic Artifacts

Cat.#	Provenience	Type	Period	Description
.1017	Feature 22	lump of clay		• approximate dimensions: 25.5mm(l) x 16.5mm(w) x 7.7mm(t)

We are reluctant, however, to place the ceramic sample from Riverview within the Saugeen Complex, and suggest the Middle Woodland occupants of this site would perhaps be better understood as part of a localized cultural manifestation. Indeed, Spence (1986:93; see also Ferris 1999:20; Ferris and Spence 1995:98; Spence et al. 1990:143) has suggested that, given the nature and extent of interaction, intermarriage and settlement-subsistence practices during Middle Woodland times, we should expect to see more of an archaeological continuum of change rather than crisp cultural boundaries, where small, localized groups differ only marginally from their nearest neighbours, but rather markedly from more remote groups.

SUMMARY AND CONCLUSIONS

The various assessments of the Riverview site together have resulted in the recovery of over 5,300 artifacts which indicate that the site was occupied repeatedly from at least the Late Archaic through Late Woodland periods, a span of approximately 5,000 years. Diagnostic artifacts recovered during the 1998 investigations (*ASI* 1998a, 1998b) suggest, however, that the most extensive occupations of the site occurred during the Late Archaic through Middle Woodland periods. Diagnostic materials recovered during the Stage 4 investigations are limited to the Middle Woodland period occupation (ca. 2,450-1,450 B.P.) of the site.

The results of the 1998 assessments indicate that the site has been severely impacted by previous landscape alterations. Extensive filling activities were carried out to the north and south of the area of the surface scatter during the late 1970s and early 1980s, if not earlier in the case of the northern slough. A sanitary sewer was installed and a soccer pitch was constructed within the central and eastern portions of the site as defined by the surface scatter. Both features have resulted in considerable disturbance. In the case of the soccer pitch, this likely entailed filling the swale that traversed the property from southeast to northwest. The absence of topsoil in the northwestern portion of the surface scatter, and in eight of the 12 one-metre-square test units from the western fencerow, suggests that the construction of the soccer pitch may have involved use of soil from this area to level the playing surface. The absence of topsoil in this area can also be said to have hindered the identification of subsurface cultural remains, in that stratification of soil horizons could not be relied upon for a vertical 'benchmark' in the search for features. That this area exhibits the greatest density of surface material, however, suggests that subsurface features were indeed present in this area, but were subsequently ploughed out and their contents scattered. Evidence of extensive filling in the northern portion of Trenches B, C, and E further suggests that the surface scatter is a product of earth-moving activities. The presence of features, however, in the southern reaches of Trenches B, C, and D indicates that site integrity in this area has not been completely compromised.

Although the recovery rate of intact subsurface features was extremely sparse for the time and effort involved, it is further suggested that other features may well be present in areas adjacent to the excavated trenches. As such, it was recommended in the Stage 4 report that additional stripping be undertaken between Trenches B and C, and around Trenches C1 and D (see Figure 4). Furthermore, the presence of intact topsoils in the fencerow along the western property boundary (see Figure 4) also indicates that additional subsurface features may be present there as well. Accordingly, it was also recommended in the Stage 4 report that this area should receive further investigation in the form of hand-excavated one-metre-square units.

Unfortunately, since the Stage 4 report was completed in January 1999, very little activity has taken place on the property. We understand the City of Welland, the *OMTCR*, and the developer have agreed to preserve the fencerow along the western property boundary, thereby obviating the need for further mitigative measures in this area. Thus, while there is still interest in the development of the property, progress has been slow due to the economic climate of the region. Archaeological investigations at Riverview, as such, remain incomplete, yet it is hoped the site will receive further investigation in the near future, thereby offering a more nuanced understanding of precontact occupations within the region.

Acknowledgements

We would like to thank Mr. Paul Kernahan of Ricenberg Developments, Mr. Neal Ferris of the *OMTCR*, and Mr. Jerry Shepetemko for their cooperation and assistance during the excavation. Dr. Ronald Williamson served as Project Director, while the field crew consisted of Mr. Jeremy Cunningham, Ms. Vivian Livojevic, Ms. Jennifer McKee, Mr. Michael Tetreau, Ms. Caroline Theriault and Ms. Keli Watson. Our thanks are also extended to Mr. Andrew Clish, who prepared the graphics in this report, and to Ms. Keli Watson who prepared the artifact plates. We would also like to thank Dr. Ron Williamson for his comments on an earlier draft on this paper.

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